The New Jersey Toxics Reduction Workplan for NY-NJ Harbor:
Blank Contamination Impacts on the Useability of Ambient Water Sample Data

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Abstract
As part of the New York-New Jersey Harbor Estuary Program Contaminant Assessment and Reduction Program, the New Jersey Toxics Reduction Workplan for NY-NJ Harbor has collected ambient surface water samples at 20 locations throughout the estuary. Large-volume water samples were collected using the Stevens-Trace Organics Platform Sampler, which included glass fiber filters (to collect suspended sediments and associated organic contaminants) and XAD resin columns (to collect dissolved fraction PCBs and pesticides). The samples were analyzed using high-resolution methods for PCBs (USEPA Method 1668a), dioxins/furans (USEPA Method 1613b), PAHs, and pesticides. Grab samples were collected and analyzed for Cd and Pb (USEPA Method 1638), Hg and methyl-Hg (USEPA Method 1631), and dissolved PAHs. Field, equipment, and laboratory method blanks were collected and analyzed in association with the ambient water samples. Based on USEPA guidelines, blank contamination impacts on the sample data were evaluated using a "5X Maximum Blank Approach" developed specifically for this project. Blank contamination impacts on the sample data for the suspended sediment fraction of the organic contaminants were minimal. The dissolved fraction PAH data was consistently impacted by blank contamination, particularly for naphthalene compounds, fluorene, and dibenz(a,h)anthracene. Sample data for dissolved Hg and methyl-Hg were also frequently impacted by blank contamination. This poster will present and discuss observed blank contamination impacts (or the lack of such impacts) on the sample data in relation to analytical quantitation levels and observed ambient concentrations.